

**REMARKS**

This application has been carefully reviewed in view of the above-referenced Office Action, and reconsideration is requested in view of the following remarks.

**Background**

Before proceeding to the arguments below, it is believed that a review of the claimed technology and background need therefor will be helpful. This description is not intended to limit the invention in any manner, but is merely provided as a convenience to refresh the Examiner's memory.

As described in the specification, there is currently a large installed base of digital television sets which have no decryption capability. However, it is desirable to content owners for broadcasters (particularly terrestrial broadcasters) of digital content to protect the content against piracy, since a digital copy is as good as the original. But, protecting the content with encryption would render the installed base of DTVs unable to decode the content without modification or addition of decryption equipment.

At least as a transitional measure, the claimed invention seeks to solve this problem by providing content that is available in the clear (unencrypted) along with selective portions of the content being encrypted. This renders decryption ready television sets able to decrypt and decode the content while preserving the ability of legacy DTVs to decode the content until such time as it becomes more feasible by normal obsolescence of legacy DTVs to provide only encrypted content.

**Regarding the Rejections under 35 U.S.C. §101**

Applicants disagree with the USPTO's current position regarding the patentability of so-called "signal claims", but rather than hold up the allowance of other claims while this matter is settled, claims 23-31 have been cancelled without prejudice. Applicants reserve the right to represent these claims in a continuing application.

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**Regarding the Rejections under 35 U.S.C. §103**

Considering first claim 1, the undersigned asks the Examiner to examine the original claim language carefully. This language was crafted to mean that the duplicate is encrypted while the selected packet that is duplicated remains unencrypted. Upon re-examination of the claim language, it is apparent that this is not as clearly worded as the undersigned would like. Accordingly, while not narrowing the scope of the claim, the claim has been amended so that it is clear that once the selected packets are duplicated, a selectively encrypted signal is created which contains both encrypted and unencrypted copies of the same selected packets. In other words, in addition to encrypted versions of selected packets being transmitted, a fully clear version of the content is also transmitted.

In accordance with the requirements of the *Graham v. John Deere*, (383 U. S. 1, 1966) test for obviousness, one must ascertain the scope of the prior art. To do so, let us first consider the teachings of each of the cited references.

Regarding the Nanjundiah reference of record, this reference merely shows one technique for selective encryption. The method involves selection of a collection of packets from a sequence of packets and encrypting those packets to create a selectively encrypted sequence of packets. However, in all cases, the packets that emerge from Nanjundiah's process are either encrypted or unencrypted (depending upon whether or not they are selected) but not both. If both encrypted and unencrypted versions of the same packet are provided, as in the case of Applicant's claims, the purpose of Nanjundiah's teachings would appear to be defeated since the full content is available by simply ignoring the encrypted packets.

Regarding the Carny reference, it is asserted that Carny supplies the missing element claimed of duplication of packets that are selected. Carny uses a unique metakey that is provided for a given selection of content to provide for decryption of different segments of the content using a different portion of the metakey. Carny does in fact duplicate packets, however, those packets are duplicated and stored in many encrypted forms so that an encrypted version of the final content can be quickly assembled along with a unique metakey used for decryption of the content. It is this uniquely encrypted version of the content that is transmitted to the end recipient. In this manner, the original end recipient of the content can be identified by the

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metakey should the recipient choose to redistribute copies of the content to others. It is again noted, however, that Carny's content is never transmitted to an end user with 1) duplicate copies of the same packet or 2) duplicate copies of the content in which one of the duplicate copies is unencrypted.

Hence, under the Graham test, the cited art falls short of disclosing duplication of selected packets and assembling a digital television signal having duplicate copies of selected packets with one copy of the selected packets being encrypted and one copy of the selected packets being unencrypted.

The question then becomes whether one of ordinary skill in the art would consider this modification to the combination of Nanjundiah and Carny to be obvious. Applicant submits that it would not be obvious and would in fact be quite contrary to the teachings of both references and indeed the even a quite high level of skill in the art. Applicants submit that this is the case since the claimed television signal is decodable without use of any decryption (by legacy DTV devices). If one modifies the proposed combination (assuming arguendo that the combination is proper – Applicant further submits that it is not, but this need not be argued at this time) so that the encrypted packets are also provided in the clear, the purpose of both of the cited references is defeated. Nanjundiah's output signal becomes decodable without need for decryption, and Carny's output signal 1) contains two copies of certain of the content and a portion of that content is unencrypted rendering the metakey unusable for purposes of identification of the original recipient (if one simply deletes the encrypted packets that are duplicates).

The Office Action further asserts that the reason for combination of Nanjundiah and Carny is to realize a method for "on-line, real-time personalized encryption). However, if all of Applicants claim features are met, one fails to realize this result at all since the selected packets that are duplicated are also transmitted unencrypted – thus removing any personalization and rendering the content freely available (recall that Applicant's claims are directed primarily to a transitional format that prevents premature obsolescence of an installed base of DTVs). Moreover, none of the cited art recognizes the problem addressed by Applicants and that is providing for decryption functions in content during a transitional period, while permitting legacy broadcast DTV receivers to continue to function normally.

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In order to establish *prima facie* obviousness, it is the burden of the Office to identify each element of the claims in the prior art and further, to provide an explicit analysis as to the reasoning to support a conclusion of obviousness. (See *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006) - “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). In the present case, the cited art fails to provide a teaching of each of the claim elements described, and further, the Office Action is devoid of any articulated reasoning as to why one of ordinary skill in the art would find the claims as a whole to be obvious in the absence of the claim features enumerated above that are not present in the cited art. In view of these clear shortcomings in the rejection it is evident that *prima facie* obviousness has not been established. Accordingly, reconsideration of claim 1 and allowance is respectfully requested at an early date.

Regarding claims 10 and 20, these claims have been amended in a manner similar to that of claim 1 in order to clarify the presence of both encrypted and unencrypted copies of the same packets are present in the selectively encrypted signal. Hence, these claims are submitted to be allowable under the same reasoning as that presented above for claim 1, and reconsideration is respectfully requested.

Regarding claims 2-9, 11-13 and 21-22, these claims are dependent from claims 1 or 10 and are allowable for at least the same reasons presented above. While other distinctions exist, it is believed clear that these claims are allowable and the remaining distinctions need not be addressed at this time. Reconsideration and allowance are respectfully requested.

Regarding independent claims 14 and 17, these claims as originally written clearly call for the presence of both encrypted and unencrypted versions of the same packets as argued above. Hence, the arguments presented above are equally applicable. Again, other distinctions exist, but it is believed clear that these claims are allowable and the remaining distinctions need not be addressed at this time. Reconsideration and allowance are respectfully requested.

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Regarding dependent claims 15 and 18-19, these claims are dependent from claims 14 or 17 and are allowable for at least the same reasons presented above. While other distinctions exist, it is believed clear that these claims are allowable and the remaining distinctions need not be addressed at this time. Reconsideration and allowance are respectfully requested.

New claims 32-36 are submitted for the Examiner's consideration. These claims further define certain embodiments consistent with the invention. These claims are clearly supported by the specification at and about page 15 of the specification.

#### **Concluding Remarks**

The undersigned notes that many other distinctions exist between the cited art and the claims. However, in view of the clear distinctions pointed out above, further discussion is believed to be unnecessary at this time. Failure to address each point raised in the Office Action should accordingly not be viewed as accession to the Examiner's position or an admission of any sort.

No amendment made herein was related to the statutory requirements of patentability and no amendment made was for the purpose of narrowing the scope of any claim. All amendments were made solely for the purpose of enhancing the clarity thereof. The language selected in these amendments is also intended to make it clear that either the original or duplicate of the selected packets can be those encrypted so that the claims are not limited to encryption of either the original packet or the duplicate.

#### **Interview Request**

In view of this communication, all claims are now believed to be in condition for allowance and such is respectfully requested at an early date. If further matters remain to be resolved, the undersigned respectfully requests the courtesy of an interview. The undersigned can be reached at the telephone number below.

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